Y-Z is -CH₂CH₂- or -CONR³-; A is O or NR¹; m is 0 or 1;

R¹ is hydrogen or C₁₋₃ alkyl;

each non-aromatic ring carbon atom is unsubstituted or independently substituted with one or two R^2 substituents and each aromatic ring carbon atom is unsubstituted or independently substituted with one R^2 substituent selected from the group consisting of

C1-8 alkyl, C3-8 cycloalkyl,
C3-8 cycloheteroalkyl, C3-8 cycloalkyl-C1-6 alkyl,
C3-8 cycloheteroalkyl-C1-6 alkyl, aryl, aryl-C1-6 alkyl, amino,
amino-C1-6 alkyl, C1-3 acylamino, C1-3 acylamino-C1-6 alkyl,
(C1-6 alkyl)1-2 amino, C3-6 cycloalkyl-C0-2 amino,
(C1-6 alkyl)1-2 amino-C1-6 alkyl, C1-6 alkoxy, C1-4 alkoxy-C1-6 alkyl,
hydroxycarbonyl, hydroxycarbonyl-C1-6 alkyl, C1-3 alkoxycarbonyl,
C1-3 alkoxycarbonyl-C1-6 alkyl, hydroxy, hydroxy-C1-6 alkyl,
nitro, cyano, trifluoromethyl, trifluoromethoxy, trifluoroethoxy,
C1-8 alkyl-S(O)0-2, (C1-8 alkyl)0-2 aminocarbonyl,
C1-8 alkyloxycarbonylamino, (C1-8 alkyl)1-2 aminocarbonyloxy,
(aryl C1-3 alkyl)1-2 amino, and C1-8 alkylsulfonylamino;

or two R^2 substituents, when on the same non-aromatic carbon atom, are taken together with the carbon atom to which they are attached to form a carbonyl group, or two R^2 substituents, together with the carbon atoms to which they are attached, join to form a 3- to 6-membered saturated spiro-carbocyclic ring;

R³ is hydrogen or C₁₋₄ alkyl;

R4 is aryl wherein the aryl group is selected from the group consisting of

- (1) phenyl,
- (2) naphthyl,
- (3) pyridinyl,
- (4) furyl,

(5) thienyl,

- (6) pyrrolyl,
- (7) oxazolyl,
- (8) thiazolyl,
- (9) imidazolyl,
- (10) pyrazolyl,
- (11) isoxazolyl,
- (12) isothiazolyl,
- (13) pyrimidinyl,
- (14) pyrazinyl,
- (15) pyridazinyl,
- (16) quinolyl,
- (17) isoquinolyl,
- (18) benzimidazolyl,
- (19) benzofuryl,
- (20) benzothienyl,
- (21) indolyl,
- (22) benzthiazolyl,
- (23) benzoxazolyl,
- (24) dihydrobenzofuryl,
- (25) benzo(1,3)dioxolanyl,
- (26) benzo(1,4)dioxanyl, and
- (27) quinoxalinyl;

and mono, di, and tri-substituted aryl wherein the substituents are independently hydrogen, hydroxy, hydroxy-C1-6 alkyl, halogen, C1-8 alkyl, C3-8 cycloalkyl, aryl, aryl C1-3 alkyl, amino, amino C1-6 alkyl, C1-3 acylamino, C1-3 acylamino-C1-6 alkyl, C1-6 alkylamino, di(C1-6)alkylamino, C1-6 alkylamino-C1-6 alkyl, di(C1-6)alkylamino-C1-6 alkyl, C1-4 alkoxy, C1-4 alkylthio, C1-4 alkylsulfinyl, C1-4 alkylsulfonyl, C1-4 alkoxy-C1-6 alkyl, hydroxycarbonyl, hydroxycarbonyl-C1-6 alkyl, C1-5 alkoxycarbonyl, C1-3 alkoxycarbonyl-C1-6 alkyl, C1-5 alkylcarbonyloxy, cyano, trifluoromethyl, 1,1,1-trifluoroethyl, trifluoromethoxy, trifluoroethoxy, or nitro; or two adjacent substituents together with the carbon atoms to which they are attached join to form a five- or six-membered saturated or unsaturated ring containing 1 or 2 heteroatoms selected from the group consisting of N, O, and S, whose ring carbon atoms may be substituted with oxo or C1-3 alkyl; and

 R^5 is hydrogen or C_{1-3} alkyl.

2. (amended) The $\underline{\mathbf{A}}$ compound of Claim 1 wherein X is [selected from the group consisting of]

$$\begin{bmatrix} & & & & & \\ & & & & \\ & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & \\ & & & \\ & & \\ & & & \\ & & \\ & & & \\ & & \\ & & & \\ & & & \\ & &$$

Y is -CH₂CH₂-; and R², R⁴, and R⁵ are as defined in Claim 1.

3. (amended) The $\underline{\mathbf{A}}$ compound of Claim 2 wherein \mathbb{R}^4 is mono- or disubstituted

phenyl,
pyridinyl,
quinolyl,
pyrimidinyl,
pyrazinyl,
quinoxalinyl, or
dihydrobenzofuryl;

wherein the substituents are independently hydrogen, hydroxy, hydroxy-C₁₋₆ alkyl, halogen, C₁₋₈ alkyl, C₃₋₈ cycloalkyl, aryl, aryl C₁₋₃ alkyl, amino, amino-C₁₋₆ alkyl, C₁₋₃ acylamino, C₁₋₆ alkyl, C₁₋₆ alkylamino, di(C₁₋₆)alkylamino, C₁₋₆ alkylamino C₁₋₆ alkyl, di(C₁₋₆)alkylamino-C₁₋₆ alkyl, C₁₋₄ alkoxy, C₁₋₄ alkylthio, C₁₋₄ alkylsulfinyl, C₁₋₄ alkylsulfonyl, C₁₋₄ alkoxy-C₁₋₆ alkyl, hydroxycarbonyl, hydroxycarbonyl-C₁₋₆ alkyl, C₁₋₅ alkoxycarbonyl, C₁₋₃ alkoxycarbonyl C₁₋₆ alkyl, C₁₋₅ alkylcarbonyloxy, cyano, trifluoromethyl, 1,1,1-trifluoroethyl, trifluoromethoxy, trifluoroethoxy, or nitro; or two adjacent substituents together with the carbon atoms to which they are attached join to form a five- or six-membered

saturated or unsaturated ring containing 1 or 2 heteroatoms selected from the group consisting of N, O, and S, whose ring carbon atoms may be substituted with oxo or C₁₋₃ alkyl.

4. (amended) The $\underline{\mathbf{A}}$ compound of Claim 3 wherein R^4 is mono- or disubstituted

pyridinyl, quinolyl, pyrimidinyl, pyrazinyl, quinoxalinyl, or dihydrobenzofuryl;

wherein the substituents are independently hydrogen, halogen, phenyl, C₁₋₄ alkyl, C₃₋₆ cycloalkyl, C₁₋₃ alkoxy, amino, C₁₋₃ alkylamino, di(C₁₋₃) alkylamino, hydroxy, cyano, trifluoromethyl, 1,1,1-trifluoroethyl, trifluoromethoxy, or trifluoroethoxy.

5. (amended) The \underline{A} compound of Claim 4 wherein R^2 is selected from the group consisting of

hydrogen, amino, C₁₋₄ alkylamino, C₃₋₆ cycloalkyl-C₀₋₂ alkylamino cyano, C₁₋₄ alkyl, cyclopropyl, aryl C₁₋₃ alkyl, C₁₋₄ acylamino, C₁₋₄ alkoxy, C₁₋₄ alkylthio, aminocarbonyl,... (C₁₋₆ alkyl)₁₋₂ aminocarbonyl, C₁₋₄ alkoxycarbonyl, trifluoromethyl, and trifluoromethoxy.

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 $\mbox{6.} \qquad \mbox{(amended) The A compound of Claim 5 wherein R^2 is selected from the} \\ \mbox{group consisting of}$

hydrogen,
amino,
C1-3 alkylamino,
C3-6 cycloalkylmethylamino,
C1-4 alkyl,
cyclopropyl,
trifluoromethyl, and
trifluoromethoxy.

- 7. (amended) The compound of Claim 1 selected from the group consisting of:
- {[5-(2,4-Diaminopyrimidin-6-yl)pentanoyl]-(N-methyl)amino}-3-(6-methoxypyridin-3-yl)-propanoic acid;
- {[5-(2,4-Diaminopyrimidin-6-yl)pentanoyl]-(N-methyl)amino-3(R)-(6- methoxypyridin-3-yl)-propanoic acid;
- {[5-(2,4-Diaminopyrimidin-6-yl)pentanoyl]-(N-methyl)amino-3(S)-(6- methoxypyridin-3-yl)-propanoic acid;
- {[5-(3-Amino-5,6,7,8-tetrahydroisoquinolin-1-yl)pentanoyl]-(N-methyl)amino}-3-(6-methoxypyridin-3-yl)-propanoic acid;
- {[5-(3-Amino-5,6,7,8-tetrahydroisoquinolin-1-yl)pentanoyl]-(N-methyl)amino}-3(R)-(6-methoxypyridin-3-yl)-propanoic acid;
- {[5-(3-Amino-5,6,7,8-tetrahydroisoquinolin-1-yl)pentanoyl]-(N-methyl)amino}-3(S)-(6-methoxypyridin-3-yl)-propanoic acid;
- 3 (5-3,4 Dihydro 2H pyrido[3,2 b][1,4]oxazin 6-yl-pentanoylamino) 3 (quinolin 3-yl) propionic acid;

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3 (5-3,4-Dihydro 2H pyrido[3,2 b][1,4]oxazin-6-yl-pentanoylamino)-3(R) (quinolin 3-yl)-propionic acid;

3 (5-3,4 Dihydro 2H pyrido[3,2-b][1,4]oxazin 6 yl pentanoylamino) 3(S) (quinolin 3-yl)-propionic acid;

3 (Quinolin 3 yl) 3 (5-1,2,3,4-tetrahydro-pyrido[2,3-b]pyrazin-6-yl-pentanoylamino) propionic acid;

3(R) (Quinolin 3 yl) 3 (5 1,2,3,4 tetrahydro pyrido[2,3 b]pyrazin 6 yl pentanoylamino) propionic acid;

3(S) (Quinolin-3-yl)-3 (5-1,2,3,4 tetrahydro-pyrido[2,3-b]pyrazin-6-yl-pentanoylamino)-propionic acid;

9 (6 Methylamino pyridin 2 yl) 3 (pyrimidin 5 yl) nonanoic acid;

9 (6 Methylamino pyridin 2-yl) 3(R) (pyrimidin-5-yl) nonanoic acid;

9 (6 Methylamino pyridin-2-yl)-3(S)-(pyrimidin-5-yl)-nonanoic-acid;

9-(2,4-Diaminopyrimidin-6-yl)-3-(quinolin-3-yl)-nonanoic acid;

9-(2,4-Diaminopyrimidin-6-yl)-3(R)-(quinolin-3-yl)-nonanoic acid;

9-(2,4-Diaminopyrimidin-6-yl)-3(S)-(quinolin-3-yl)-nonanoic acid;

3(2-Methyl-pyrimidin-5-yl)-9-(6,7,8,9-tetrahydro-5H-pyrido[2,3-b]azepin-2-yl)-nonanoic acid;

3(R)-(2-Methyl-pyrimidin-5-yl)-9-(6,7,8,9-tetrahydro-5H-pyrido[2,3-b]azepin-2-yl)-nonanoic-acid;

3(S)-(2-Methyl-pyrimidin-5-yl)-9-(6,7,8,9-tetrahydro-5H-pyrido[2,3-b]azepin-2-yl)-nonanoic acid;

3-Pyrimidin-5-yl-9-(6,7,8,9-tetrahydro-5H-pyrido[2,3-b]azepin-2-yl)-nonanoic acid; 3(R)-Pyrimidin-5-yl-9-(6,7,8,9-tetrahydro-5H-pyrido[2,3-b]azepin-2-yl)-nonanoic acid; 3(S)-Pyrimidin-5-yl-9-(6,7,8,9-tetrahydro-5H-pyrido[2,3-b]azepin-2-yl)-nonanoic acid; (2-Methyl-pyrimidin-5-yl)-9-(1,4,5,6-tetrahydro-pyrimidin-2-ylcarbamoyl)-nonanoic acid; 3(R)-(2-Methyl-pyrimidin-5-yl)-9-(1,4,5,6-tetrahydro-pyrimidin-2-ylcarbamoyl)-nonanoic acid; 3(S)-(2-Methyl-pyrimidin-5-yl)-9-(1,4,5,6-tetrahydro-pyrimidin-2-ylcarbamoyl)-nonanoic acid; 9-(6 Methylamino pyridin 2 yl) 3 (2 methyl-pyrimidin-5-yl) nonanoic acid; 9 (6 Methylamino-pyridin-2-yl)-3(R)-(2-methyl-pyrimidin-5-yl) nonanoic acid; 9 (6 Methylamino pyridin 2 yl) 3(S) (2 methyl-pyrimidin-5-yl) nonanoic acid; 3 (2 Methoxy pyrimidin-5-yl)-9-(6-methylamino-pyridin-2-yl) nonanoic acid; 3(R) (2 Methoxy-pyrimidin-5-yl)-9-(6-methylamino-pyridin 2 yl) nonanoic acid; 3(S) (2 Methoxy pyrimidin 5-yl)-9 (6-methylamino pyridin 2 yl) nonanoic acid; 3 (2 Ethoxy-pyrimidin-5-yl) 9 (6 methylamino pyridin 2 yl) nonanoic acid; 3(R) (2-Ethoxy-pyrimidin-5-yl) 9 (6-methylamino-pyridin-2-yl)-nonanoic-acid; 3(S) (2-Ethoxy-pyrimidin-5-yl) 9 (6-methylamino pyridin-2-yl) nonanoic acid; 9-(6-Ethylamino pyridin-2-yl)-3-(2-methyl-pyrimidin-5-yl)-nonanoic acid; 9 (6 Ethylamino pyridin 2 yl) 3(R) (2 methyl pyrimidin 5 yl) nonanoic acid;

9-(6-Ethylamino pyridin 2 yl) 3(S) (2 methyl pyrimidin 5 yl) nonanoic acid;

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3 (2 Methoxy pyrimidin-5-yl) 9-(6-ethylamino-pyridin 2-yl) nonanoic acid; 3(R) (2 Methoxy pyrimidin 5 yl) 9 (6 ethylamino pyridin 2 yl) nonanoic acid; 3(S) (2-Methoxy-pyrimidin 5 yl) 9 (6-ethylamino-pyridin 2-yl)-nonanoic acid; 3 (2 Ethoxy pyrimidin 5 yl) 9 (6 ethylamino-pyridin 2 yl) nonanoic acid; 3(R) (2 Ethoxy-pyrimidin-5-yl) 9 (6 ethylamino pyridin 2 yl) nonanoic acid; 3(S) (2 Ethoxy pyrimidin-5 yl) 9 (6 ethylamino pyridin-2 yl) nonanoic acid; 9-(4-Amino-2-ethylaminopyrimidin-6-yl)-3-(dihydrobenzofuran-6-yl)-nonanoic acid; 9-(4-Amino-2-ethylaminopyrimidin-6-yl)-3(R)-(dihydrobenzofuran-6-yl)-nonanoic acid; 9-(4-Amino-2-ethylaminopyrimidin-6-yl)-3(\$)-(dihydrobenzofuran-6-yl)-nonanoic acid; 9-(4-Amino-2-ethylaminopyrimidin-6-yl)-3-(6-methoxypyridin-3-yl)nonanoic acid; 9-(4-Amino-2-ethylaminopyrimidin-6-yl)-3(R)-(6-methoxypyridin-3-yl)nonanoic acid; 9-(4-Amino-2-ethylaminopyrimidin-6-yl)-3(S)-(6-methoxypyridin-3-yl)nonanoic acid; 9-(4-Amino-2-ethylaminopyrimidin-6-yl)-3-(2-methoxypyrimidin-5-yl)nonanoic acid; 9-(4-Amino-2-ethylaminopyrimidin-6-yl)-3(R)-(2-methoxypyrimidin-5-yl)nonanoic acid; 9-(4-Amino-2-ethylaminopyrimidin-6-yl)-3(S)-(2-methoxypyrimidin-5-yl)nonanoic acid; 9-(4-Amino-2-ethylaminopyrimidin-6-yl)-3-(2-ethoxypyrimidin-5-yl)nonanoic acid; 9-(4-Amino-2-ethylaminopyrimidin-6-yl)-3(R)-(2-ethoxypyrimidin-5-yl)nonanoic acid; 9-(4-Amino-2-ethylaminopyrimidin-6-yl)-3(S)-(2-ethoxypyrimidin-5-yl)nonanoic acid; 9-(4-Amino-2-ethylaminopyrimidin-6-yl)-3-(2-methylpyrimidin-5-yl)nonanoic acid; 9-(4-Amino-2-ethylaminopyrimidin-6-yl)-3(R)-(2-methylpyrimidin-5-yl)nonanoic acid; 9-(4-Amino-2-ethylaminopyrimidin-6-yl)-3(S)-(2-methylpyrimidin-5-yl)nonanoic acid; 9-(4-Amino-2-ethylaminopyrimidin-6-yl)-3-(quinoxalin-2-yl)nonanoic acid; 9-(4-Amino-2-ethylaminopyrimidin-6-yl)-3(R)-(quinoxalin-2-yl)nonanoic acid;

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9-(4-Amino-2-ethylaminopyrimidin-6-yl)-3(S)-(quinoxalin-2-yl)nonanoic acid;

9-(2-Amino-4-ethylaminopyrimidin-6-yl)-3-(2-ethoxypyrimidin-5-yl)nonanoic acid;

9-(2-Amino-4-ethylaminopyrimidin-6-yl)-3(R)-(2-ethoxypyrimidin-5-yl)nonanoic acid;

9-(2-Amino-4-ethylaminopyrimidin-6-yl)-3(S)-(2-ethoxypyrimidin-5-yl)nonanoic acid;

9-(4-Amino-2-aminopyrimidin-6-yl)-3-(2-methylpyrimidin-5-yl)nonanoic acid;

9-(4-Amino-2-aminopyrimidin-6-yl)-3(R)-(2-methylpyrimidin-5-yl)nonanoic acid;

9-(4-Amino-2-aminopyrimidin-6-yl)-3(S)-(2-methylpyrimidin-5-yl)nonanoic acid;

9-(2-Ethylaminopyrimidin-6-yl)-3-(2-ethoxypyrimidin-5-yl)nonanoic acid;

9-(2-Ethylaminopyrimidin-6-yl)-3(R)-(2-ethoxypyrimidin-5-yl)nonanoic acid;

9-(2-Ethylaminopyrimidin-6-yl)-3(S)-(2-ethoxypyrimidin-5-yl)nonanoic acid;

9 (6 Methylamino pyridin 2 yl) 3 quinoxalin 2 yl-nonanoic acid;

3(R)-9-(6 Methylamino-pyridin 2-yl)-3-quinoxalin-2-yl-nonanoic-acid;

3(S) 9 (6 Methylamino pyridin 2 yl) 3 quinoxalin 2 yl nonanoic acid;

9 (2,3-Dihydro 1H-pyrrolo[2,3 b]pyridin 6 yl)-3 (2 methyl-pyrimidin 5-yl) nonanoic acid;

3(R) 9 (2,3 Dihydro 1H pyrrolo[2,3 b]pyridin 6 yl) 3 (2 methyl pyrimidin 5 yl) nonanoic acid;

3(S) 9-(2,3-Dihydro-1H-pyrrolo[2,3-b]pyridin-6-yl) 3-(2 methyl-pyrimidin-5-yl) nonanoic acid; and

3-(2-Methyl-pyrimidin-5-yl)-10-(1,4,5,6-tetrahydro-pyrimidin-2-ylamino)-decanoic acid;

or a pharmaceutically acceptable salt thereof.

8. (canceled)

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9. (original) A pharmaceutical composition comprising a compound according to Claim 1 and a pharmaceutically acceptable carrier.

- 10. (original) The composition of Claim 9 which further comprises an active ingredient selected from the group consisting of
 - a) an organic bisphosphonate or a pharmaceutically acceptable salt or ester thereof,
 - b) an estrogen receptor modulator,
 - c) an androgen receptor modulator,
 - d) a cytotoxic/antiproliferative agent,
 - e) a matrix metalloproteinase inhibitor,
 - f) an inhibitor of epidermal-derived, fibroblast-derived, or platelet-derived growth factors,
 - g) an inhibitor of VEGF,
 - h) an antibody to a growth factor or a growth factor receptor,
 - i) an inhibitor of Flk-1/KDR, Flt-1, Tck/Tie-2, or Tie-1,
 - j) a cathepsin K inhibitor,
 - k) a growth hormone secretagogue,
 - 1) an inhibitor of osteoclast proton ATPase,
 - m) an inhibitor of urokinase plasminogen activator (u-PA),
 - n) a tumor-specific antibody-interleukin-2 fusion protein,
 - o) an inhibitor of HMG-CoA reductase, and
 - p) a farnesyl transferase inhibitor or a geranylgeranyl transferase inhibitor or a dual farnesyl/geranylgeranyl transferase inhibitor; and mixtures thereof.
- 11. (original) The composition of Claim 10 wherein said active ingredient is selected from the group consisting of
 - a) an organic bisphosphonate or a pharmaceutically acceptable salt or ester thereof,
 - b) an estrogen receptor modulator,
 - c) an androgen receptor modulator,
 - d) a cathepsin K inhibitor,
 - e) an HMG-CoA reductase inhibitor, and
 - f) an inhibitor of osteoclast proton ATPase;
 and mixtures thereof.

12. (original) The composition of Claim 11 wherein said organic bisphosphonate or pharmaceutically acceptable salt or ester thereof is alendronate monosodium trihydrate.

- 13. (original) A method of eliciting an αv integrin receptor antagonizing effect in a mammal in need thereof, comprising administering to the mammal a therapeutically effective amount of a compound according to Claim 1.
- 14. (original) The method of Claim 13 wherein αv the integrin receptor antagonizing effect is an $\alpha v\beta 3$ antagonizing effect.
- 15. (original) The method of Claim 14 wherein the $\alpha \nu \beta 3$ antagonizing effect is selected from the group consisting of inhibition of bone resorption, restenosis, angiogenesis, diabetic retinopathy, macular degeneration, inflammatory arthritis, cancer, and metastatic tumor growth.
- 16. (original) The method of Claim 15 wherein the $\alpha v\beta 3$ antagonizing effect is the inhibition of bone resorption.
- 17. (original) A method of treating or preventing osteoporosis in a mammal in need thereof, comprising administering to the mammal a therapeutically effective amount of a compound according to Claim 1.
- 18. (original) The method of Claim 12 wherein the αv integrin receptor antagonizing effect is an $\alpha v\beta 5$ antagonizing effect.
- 19. (original) The method of Claim 18 wherein the $\alpha v\beta 5$ antagonizing effect is selected from the group consisting of inhibition of restenosis, angiogenesis, diabetic retinopathy, macular degeneration, inflammatory arthritis, cancer, and metastatic tumor growth.
- 20. (original) The method of Claim 13 wherein the αv integrin receptor antagonizing effect is a dual $\alpha v \beta 3/\alpha v \beta 5$ antagonizing effect.

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21. (original) The method of Claim 20 wherein the dual $\alpha v \beta 3/\alpha v \beta 5$ antagonizing effect is selected from the group consisting of inhibition of bone resorption, restenosis, angiogenesis, diabetic retinopathy, macular degeneration, inflammatory arthritis, cancer, and metastatic tumor growth.

- 22. (original) A method of eliciting an αv integrin receptor antagonizing effect in a mammal in need thereof, comprising administering to the mammal a therapeutically effective amount of the composition of Claim 9.
- 23. (original) A method of treating or preventing a condition mediated by antagonism of an αv integrin receptor in a mammal in need thereof, comprising administering to the mammal a therapeutically effective amount of the composition of Claim 9.
- 24. (original) A method of treating metastatic tumor growth in a mammal in need thereof, comprising administering to the mammal a therapeutically effective amount of a compound according to Claim 1 in combination with radiation therapy.